

REMARKS

In the second (non-final) Office Action mailed September 20, 2004, the Examiner rejected claims 1-4, 6-16, 18-20, 22-24, 26 and 27 under 35 USC 103(a) as being unpatentable over Loveridge et al (US 5,982,941) in view of Peters (US 5,592,571), and rejected claims 5, 17, 21 and 25 under 35 USC 103(a) as being unpatentable over Loveridge et al in view of Peters and Matama (US 6,101,273). Also, the Examiner objected to FIGS. 8-18 of the drawings for the sole stated reason that "the block decryptions/labels provided in Figs. 8-18 is not clear to the Examiner".

For the record, it is noted that Matama is incorrectly cited as US 6,101,424 in the rejection on page 5. Also, Schnell et al (US 6,319,465) in PTO-892 should actually be Squyres et al (US 5,319,465). See the mention of Squyres et al in the rejection on page 6.

By this Amendment, claims 1, 5, 9, 13, 17, 21 and 25 are amended and new claims 28-30 are added. New claim 28 stems from the description in the specification including at page 7, lines 3-11. New claim 29 stems from original claim 1. New claim 30 stems from original claim 13.

Claims 1-30 are now pending in the application.

Reconsideration of the objection to drawing FIGS. 8-18 and the rejection of the claims is requested in view of the following remarks.

The objection to drawing FIGS. 8-18 requires clarification before the FIGS. can be amended.

The Examiner objected to FIGS. 8-18 of the drawings for the sole stated reason that "the block decryptions/labels provided in Figs. 8-18 is not clear to the Examiner". The applicant's attorney understands this to mean that all of the "labels", broken-line blocks, and solid-line blocks indicated by the reference numbers in FIG. 8 are unclear to the Examiner, and that all of the broken-line blocks indicated by the reference numbers in FIGS. 9-18 are unclear to the Examiner. Confirmation is requested.

Each one of the blocks in FIG. 8 are identified by respective labels in the FIG., and are indicated by the reference numbers in the FIG. The labels are commonly used, conventional terms well known to one of ordinary skill in the film processing and other photographic arts. Moreover, the labels are described on

pages 26-31 of the specification. For example, "FILM" 300 is a conventional term including color, black and white, x-ray, infra red or any other type of film. "DATA PROCESSING SYSTEM" 802 comprises any type of computer or processor operable to process data. Thus, the labels and blocks in FIG. 8 should be clear to the Examiner.

Each one of the blocks in FIGS. 9-18 are indicated by respective reference numbers in the FIGS. and are described in the specification. The description of the blocks in FIG. 9 begins on page 31 of the specification. The description of the blocks in FIG. 10 begins on page 34 of the specification. The description of the blocks in FIG. 11 begins on page 35 of the specification. The description of the blocks in FIG. 12 begins on page 35 of the specification. The description of the blocks in FIG. 13 begins on page 36 of the specification. The description of the blocks in FIG. 14 begins on page 38 of the specification. The description of the blocks in FIG. 15 begins on page 42 of the specification. The description of the blocks in FIG. 16 begins on page 44 of the specification. The description of the blocks in FIG. 17 begins on page 46 of the specification. The description of the blocks in FIG. 18 begins on page 49 of the specification. Thus, the blocks in FIGS. 9-18 should be clear to the Examiner.

Also, the labels and blocks in FIGS. 8-18 should be acceptable to the Examiner since they are consistent with the inclusion of labels and blocks in FIGS. in the cited references.

If the Examiner persists in the objection to any of FIGS. 8-18, some explanation of why he continues to regard the FIGS. to be unclear is requested in order for the applicant's attorney to provide a corresponding correction.

The rejections involving Loveridge et al in view of Peters and Loveridge et al in view of Peters and Matama should be withdrawn for the following reasons.

Loveridge et al is restricted to a method of producing a digital image with improved performance characteristics, wherein there must be captured at least two photographic film images of the same scene so that respective digital images of the film images can be combined and processed to produce a third digital image with improved performance characteristics. This is specifically excluded from amended claims 1, 9, 13 and 21, and new claim 28, since these claims are limited to a single original signal, a single image, or a single digital representation of the image. Thus, Loveridge et al in combination with Peters or in combination with Peters and Matama cannot render such claims unpatentable.

In Loveridge et al the two digital images that are combined and processed to produce the third digital image with improved performance characteristics are combined and processed by the method of:

first converting the two digital images to a common color space with a common tone scale by means of color matrices and look-up tables, then converting the color-converted digital images to a common number of pixels (which is the higher number of pixels of the two digital images), and then correcting the color- and pixel-converted digital images for any differences in their global geometries so that they have a common global geometry;

then globally aligning the converted digital images and, when there is misalignment in local areas of the converted digital images, correcting the misalignment; and

then combining and processing the converted digital images to produce the third digital image.

Correcting the color- and pixel-converted digital images for any differences in their global geometries so that they have a common global geometry involves three steps described at col. 6, line 5 – col. 7, line 8. These steps do not involve obtaining first and seconds sets of information representing the same artifact to first and second different degrees of quality (as appears to have been acknowledged by the Examiner in page 3 of the rejection) so that one of the first and second sets of information represents the artifact to higher degree of quality and the remaining set of information represents the artifact to a lesser degree of quality, then determining which of the two sets of information represents the artifact to a higher degree of quality, and then altering the particular set of information representing the artifact to a lesser degree of quality, based on the other set of information representing the artifact to a higher degree of quality, to enhance quality as in the claimed invention. In this connection, the Examiner points to col. 8, lines 20-26. However, col. 8, lines 20-26 describes an example in which the two photographic film images did not capture the same scene with the same lens focus conditions so that the focus of the same scene objects (at the same distance from the camera) in the two photographic film images differs as to actual focus or sharpness. The scene object that has the best sharpness in one of the two photographic film images is used in place of the scene object that has the lesser sharpness in the other photographic image, when combining and processing the color- and pixel-converted images to produce the third digital image. There does not appear to be any altering of a particular set of information representing the artifact to a lesser degree of quality, based on another set of information representing the artifact to a higher degree of quality, as in as in the claimed invention. Consequently, the Examiner refers to col. 5, lines 41-46 which

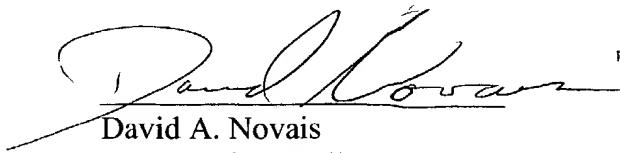
describes the need to match the number of pixels in the color-converted digital images so that the two digital images have a common number of pixels. This is done by up-sampling the digital image with the lower number of pixels to match the digital image with the higher number of pixels. However, this cannot apply to using the scene object that has the best sharpness in place of the scene object that has the lesser sharpness at col. 8, lines 20-26. Moreover, it is not an expression of obtaining first and seconds sets of information representing the same artifact to first and second different degrees of quality (as appears to have been acknowledged by the Examiner in page 3 of the rejection). Thus, Loveridge et al is inapplicable to the claimed invention.

Peters discloses an image information enhancement technique that is far afield of the method of combining and processing the two digital images to produce the third digital image with improved performance characteristics in Loveridge et al. The Examiner points to col.3, lines 35-52, in Peters. However, this describes processing two images with different smoothing factors – which is a methodology that is quite different than the one in Loveridge et al. Thus the Examiner appears to be applying col. 3, lines 35-42, in Peters into Loveridge et al in an attempt to arrive at the claimed invention. Moreover, this cannot arrive at the claimed invention, at least for the reason that two images are each processed with different smoothing factors in Peters; whereas, by contrast, in the claimed invention only one set of information is altered. Moreover, the Examiner's assertion that the motivation to add the teaching of Peters to Loveridge et al comes from a need in Loveridge et al to provide smoothing is incorrect. As mentioned in Peters at col. 4, lines 3-6, smoothing constitutes a method for reducing selected intensities in a digitized image data. This has no application in Loveridge et al.

The Examiner's addition of Matama to Loveridge et al and Peters does not cure the above-mentioned deficiencies of Loveridge et al and Peters with respect to the claimed invention.

Accordingly, the pending claims are believed to be patentable over Loveridge et al in view of Peters and over Loveridge et al in view of Peters and Matama.

Respectfully submitted,



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